Our objective was to examine the characteristics and outcomes of pediatric patients who underwent parotidectomy at our institution.

Institutional Review Board (IRB) approval was obtained to analyze the medical records of all pediatric patients (<18 years) who underwent parotidectomy at the University of Wisconsin Children’s Hospital between 1994 and 2013. The following data were extracted: sex, age, presenting signs and symptoms, initial radiographic findings, surgical pathology, tumor size (both radiographic and surgical pathology), sidedness, post-operative complications, facial nerve weakness, body mass index (BMI), and recurrence after initial surgery. Patients were placed into 2 groups: infectious or inflammatory lesions and non-infectious lesions. Non-infectious lesions were categorized as either benign or malignant. Patient presentation was characterized as either asymptomatic or symptomatic (pain, skin changes, parotitis etc.). All statistical analyses were two-tailed and were carried out using JMP Pro v.11.0.0. A p-value < 0.05 was considered statistically significant.

Electronic Medical Record Review and Patient Selection

A total of 42 patients met criteria. Twenty-two patients were diagnosed with a non-infectious parotid gland tumor based on surgical pathology. Of these, 68.2% had benign disease (n=15) and 31.8% had malignant neoplasms (n=7). 36.4% of the non-infectious masses were primary non-parotid neoplasms (n=8). All other patients (n=20) had infectious or inflammatory lesions.

Distribution of Histological Subtypes

Surgical pathology revealed 20 patients (48%) with infectious or inflammatory lesions, 15 patients (36%) with benign lesions, and 7 patients (17%) with malignant lesions. Of all non-infectious lesions (n=22), lymphangiomata and pleomorphic adenoma were the most common, representing 27.2% (n=6) and 22.7% (n=5), respectively, of all tumors. This was followed by simple parotid cysts at 9.1% (n=2). There was one of each of the following benign tumors: dermoid cyst, chondroma, branchial cleft cyst, and pleomorphic adenoma. Malignant tumors were infrequent, with mucoepidermoid carcinoma being the most common.

Characterization of parotid surgery in children is challenging due to the diverse pathologies represented and to the relative infrequency of the procedure. In addition, there are wide variations in available treatment paradigms. Moreover, the role and extent of parotid surgery in the management of atypical mycobacterial infections involving the parotid gland is somewhat controversial.

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